

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF WISCONSIN

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HAVCO WOOD PRODUCTS, LLC,

Plaintiff,

v.

PRELIMINARY  
CONSTRUCTION

INDUSTRIAL HARDWOOD  
PRODUCTS, INC.,

Defendant.

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10-cv-566-wmc

In this lawsuit, plaintiff Havco Wood Products, LLC (“Havco”) alleges that defendant Industrial Hardwood Products, Inc. (“IHP”) is infringing five of plaintiff’s patents relating to fiber reinforced composite wood boards used in the flooring of truck trailers. Both parties moved for claims construction, (dkt. ##25, 31), which the court previously granted in part and denied in part (dkt. #39). In this opinion, the court will set forth its anticipated construction of two terms: (1) “substantially continuously bonded” (‘735 patent, claims 1 and 11; ‘824 patent, claims 1 and 15; ‘766 patent, claim 29); and (2) “substantially continuously coating” (‘942 patent, claims 1 and 31; ‘765 patent, claims 1, 28, 37 and 38). This is being done in advance of Friday’s scheduled hearing in order to afford an opportunity to the parties to consider and comment on the construction at the hearing.

Havco alleges infringement of five related patents: U.S. Patent Nos. 5,928,735 (‘735 patent), 6,183,824, (‘824 patent), 6,179,942 (‘942 patent), 6,558,765 (‘765 patent), and 6,558,766 (‘766 patent). All of the inventions in the patents in suit involve

a composite flooring system for trailers typically used in the over-the-road trucking industry. The flooring is a combination of a hardwood floor segment and an underlay of a fiber reinforced plastic (“FRP”). The invention purports to disclose certain improvements over earlier flooring systems, namely the invention resists “pop-out of the hardwood segments at the shaped coupling portions and improves one or more of the flexural modulus, strength and load carrying capacity of the trailer floor.” (‘735 Patent (dkt. #1-1) col. 12:23-26.) Particularly material to the present claims construction, each of the patents describes how the hardwood floor segment is attached to the FRP. Specifically, the patents describe the hardwood as “substantially continuously bonded” to the FRP or a variant on that language. (See, e.g., ‘735 Patent (dkt. #1-1) col. 10:53-54.)

### The Scharpf Patent

The parties agree that the closest prior art is U.S. Patent No. 5,509,715 (the “Scharpf patent”), which was a focus of the prosecution of the patents in issue and which defendant IHP owns. The Scharpf patent also concerns flooring useful for truck trailers. The invention in the Scharpf patent provides:

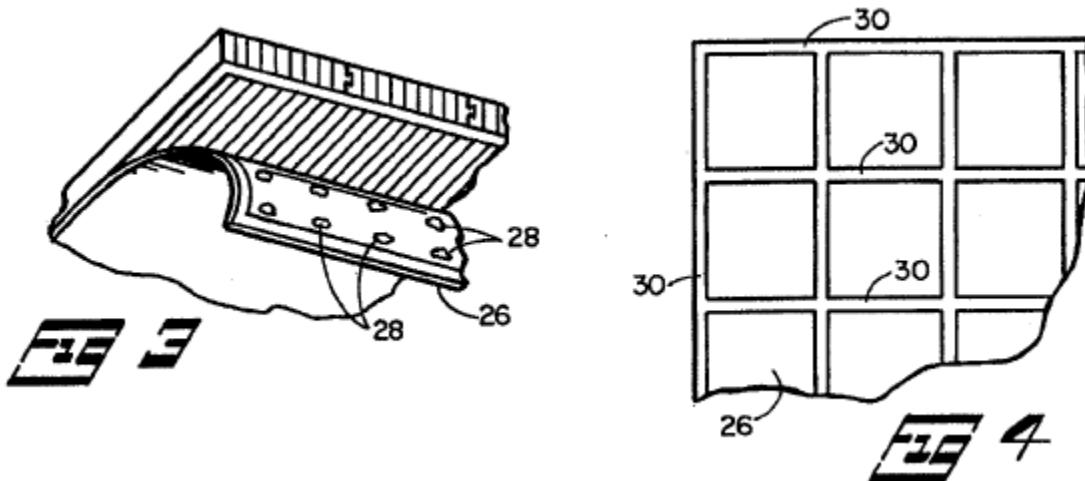
A barrier film or fabric, which is permeable to vapor and impermeable to liquid, is disposed on the undersurface of the flooring, and discontinuous means adjoins or bonds the film or fabric to the flooring at least in the perimeter of the flooring.

(Scharpf patent (dkt. #33-10) abstract.)<sup>1</sup> Claim 1 of the patent similarly discloses “discontinuous means for adjoining said plastic film or fabric to said undersurface of said flooring at least in the perimeter of said flooring.” (*Id.* at col. 8:1-3.)

“Discontinuous means” is defined in the Scharpf patent as

the line of adjoining, attaching or uniting the two components (i.e., barrier and flooring) so as to be essentially adjacent, and as a discontinuous pattern in that *less than the entire surface or area of the film or fabric is adjoined to the flooring.*

(*Id.* at col. 3:15-26 (emphasis added).) Certain diagrams portraying the “adhesive pattern as applied to the barrier,” show areas where adhesive is not applied.



(*Id.* at p.2; *see also id.* at col. 3:53-59.)

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<sup>1</sup> There are other important differences between the Scharpf patent and Havco’s patents, which are not material to this claims construction. For example, the Scharpf patent does not disclose a fiber reinforced plastic underlay, but rather a “continuous breathable layer of film or fabric.” (Scharpf Patent (dkt. #33-10) 2:61.)

### Prosecution of the '735 Patent

During the prosecution of the '735 patent, Havco originally attempted to claim its invention as “a flooring for use as a vehicle floor, the floor comprising: a laminated wood overlayment; and a fiber reinforcement underlayment *bonded* to the overlayment.” (Declaration of Anthony R. Zeuli (“Zeuli Decl.”), Ex. 1 (dkt. #29-2) 26 (emphasis added).) Havco eventually amended its claims, adding the language “substantially continuously” before bonded, and emphasizing in its responses to the patent examiner that the Scharpf patent is “**discontinuously** joined to the undersurface of a floor.” (*Id.*, Ex. 2 (dkt. #29-3) 52, 55 (emphasis in original).) In the same amendment, Havco also added the following language to claim 1:

Whereby said substantially continuous plan polymer layer of the fiber reinforced polymer bonded to the bottom surface of each of the plurality of hardwood boards of the trailer floor resists pop-out of the hardwood segments at the shaped coupling portions and improves one or more of the flexural modulus, strength and load carrying capacity of the vehicular trailer floor.

(*Id.* at 52-53; *see also* '735 Patent (dkt. #1-1) col. 10:66 - 11:5.)

The subsequent patent applications filed by Havco, and the patents issued by the USPTO, similarly include the “substantially continuously” language or language similar to that. (*See* 942 Patent (dkt. #1-3) (“substantially bonded”; “substantially continuously coating”); '824 Patent (dkt. #1-2) (“substantially continuously bonded”); '765 Patent (dkt. #1-4) (“substantially continuously coating”; “substantially bonded”); '766 Patent (dkt. #1-5) (“substantially continuous adhesive bond”; “substantially continuously bonded”).)

## OPINION

As a preliminary matter, the court rejects both of the parties' proposed constructions. Havco's proposed construction is unreasonably broad, providing less guidance than if no further construction were provided at all. Indeed, construing "substantially continuously bonded" to mean "a polymer layer bonded to a hardwood board more so than U.S. Patent No. 5,509,715 ('Scharpf')" fails to provide *any* definition of the term, much less where "substantially" falls on the continuum between a discontinuous and continuous bond. While Havco argues persuasively that the '735 patent discloses certain functional improvements over the prior art because the FRP is substantially continuously bonded to the wood overlay, Havco fails to incorporate those improvements in its proposed construction.

In contrast, IHP's proposed construction is unreasonably narrow. Borrowing language from the Scharpf patent, IHP argues that "substantially continuously bonded" means "the polymer layer being 'bonded excluding by a pattern of connection where less than the entire surface area of the polymer is adjoined, to the bottom surface wood board,'" effectively defining the phrase to mean a continuous (or absolute) bond. Such a definition fails to take into account the addition of "substantially" before "continuously bonded," and therefore is similarly unhelpful to the court or a potential jury.

While Havco fails to incorporate its argument that the court should look to the objectives of the claimed invention in construing certain terms into its proposed construction, the court finds this approach well-suited for this case. In *Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005), the Federal Circuit approved

the district court's construction, which incorporated the invention's planned objective. The district court construed the term "substantially uniform magnetic field" to mean a magnetic field that is "substantially uniform to obtain useful MRI images." *Id.* at 1318. Here, the court is persuaded that the simultaneous addition of the modifier "substantially continuously" before "bonded" and the language linking the bonding to certain objectives of the claimed invention is instructive in construing the claims "substantially continuously bonded" and "substantially continuously coating."

Accordingly, the court preliminarily construes the following disputed claim terms of United States Patent Nos. 5,928,735, 6,183,824, 6,179,942, 6,558,765, and 6,558,766 as follows:

- "substantially continuously bonded" means bonding the hardwood floor segment to the FRP underlay substantially continuously to obtain composite flooring that resists pop-out of the hardwood segments at the shaped coupling portions and improves one or more of the flexural modulus, strength and load carrying capacity of the vehicular trailer floor.
- "substantially continuously coating" means coating the hardwood floor segment to the FRP underlay substantially continuously to obtain composite flooring that resists pop-out of the hardwood segments at the shaped coupling portions and improves one or more of the flexural modulus, strength and load carrying capacity of the vehicular trailer floor.

Entered this 4th day of August, 2011.

BY THE COURT:

/s/

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WILLIAM M. CONLEY  
District Judge